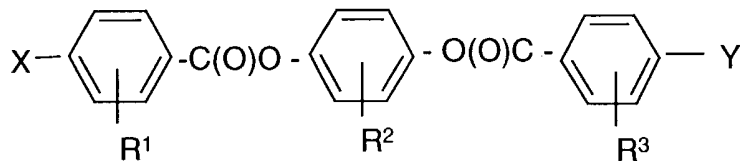


**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

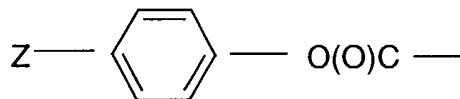
1 1-111. (Canceled).

1 112. (New) Mesogens having the following general formula:



3 wherein

4 X and Y independently comprise groups selected from the group consisting of amino  
5 groups, polymerizable groups, and groups having the following general structure:



7 wherein Z is selected from the group consisting of terminal functionalities and  
8 polymerizable groups; provided that when X comprises a polymerizable group, Y  
9 comprises an amino group;

10 R<sup>2</sup> is a bulky organic group having a bulk greater than R<sup>1</sup> and R<sup>3</sup> whereby, when both X  
11 and Y comprise polymerizable groups, said bulk provides sufficient steric  
12 hindrance to achieve a nematic state at room temperature while suppressing  
13 crystallinity at room temperature, thereby providing effective rheology and  
14 workability at room temperature; and  
15 R<sup>1</sup> and R<sup>3</sup> are selected from groups less bulky than R<sup>2</sup> which maintain said nematic state.

1           113.   (New) The mesogens of claim 112 wherein said polymerizable groups are  
2 selected from the group comprising a polymerizable unsaturated carbon-carbon bond.

1           114.   (New) The mesogens of claim 112 wherein said polymerizable groups are  
2 selected from the group consisting of acryloyloxy alkoxy groups and methacryloyloxy  
3 alkoxy groups comprising an alkyl moiety having from 2 to 12 carbon atoms.

1           115.   (New) The mesogens of claim 114 wherein said alkyl moiety is selected  
2 from the group consisting of alkyl groups consisting of CH<sub>2</sub> groups and alkyl groups  
3 wherein one or more of said CH<sub>2</sub> groups comprises a substitute group selected from the  
4 group consisting of oxygen, sulfur, and an ester group; provided that two or more carbon  
5 atoms separate said oxygen from said ester group.

1           116.   (New) The mesogens of claim 114 wherein said alkyl moiety consists  
2 essentially of a total of from 2 to 9 groups selected from the group consisting of said CH<sub>2</sub>  
3 groups and said substitute groups.

1           117.   (New) The mesogens of claim 114 wherein said alkyl moiety consists  
2 essentially of a total of from 2 to 6 groups selected from the group consisting of said CH<sub>2</sub>  
3 groups and said substitute groups.

1           118.   (New) The mesogens of claim 112 wherein R<sup>2</sup> is selected from the group  
2 consisting of alkyl groups having from about 1 to 6 carbon atoms and aryl groups.

1           119.   (New) The mesogens of claim 112 wherein R<sup>2</sup> is selected from the group  
2 consisting of methyl groups, t-butyl groups, isopropyl groups, secondary butyl groups,  
3 and phenyl groups.

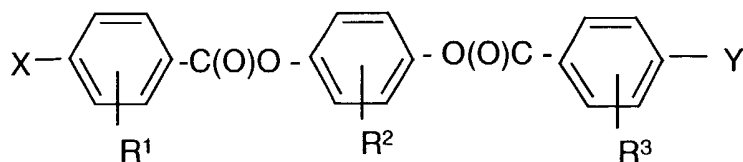
1            120. (New) The mesogens of claim 114 wherein  $R^2$  is selected from the group  
2 consisting of methyl groups, t-butyl groups, isopropyl groups, secondary butyl groups,  
3 and phenyl groups.

1            121. (New) The mesogens of claim 119 wherein R and  $R^3$  are selected from  
2 the group consisting of hydrogen and a methyl group.

1            122. (New) The mesogens of claim 112 wherein said terminal functionalities  
2 comprise spacer groups.

1            123. (New) The mesogens of claim 112 wherein said terminal functionalities  
2 independently are selected from the group consisting of hydroxyl groups, amino groups,  
3 and sulfhydryl groups.

1            124. (New) Mesogens having the following general formula:



3 wherein

4 X and Y independently comprise groups selected from the group consisting of amino  
5 groups and polymerizable groups; provided that when X comprises a  
6 polymerizable group, Y comprises an amino group;

7  $R^2$  is a bulky organic group having a bulk greater than  $R^1$  and  $R^3$  whereby, when both X  
8 and Y comprise polymerizable groups, said bulk provides sufficient steric  
9 hindrance to achieve a nematic state at room temperature while suppressing  
10 crystallinity at room temperature, thereby providing effective rheology and  
11 workability at room temperature; and  
12  $R^1$  and  $R^3$  are selected from groups less bulky than  $R^2$  which maintain said nematic state.

1           125. (New) The mesogens of claim 124 wherein said polymerizable groups are  
2 selected from the group comprising a polymerizable unsaturated carbon-carbon bond.

1           126. (New) The mesogens of claim 124 wherein said polymerizable groups are  
2 selected from the group consisting of acryloyloxy alkoxy groups and methacryloyloxy  
3 alkoxy groups comprising an alkyl moiety having from 2 to 12 carbon atoms.

1           127. (New) The mesogens of claim 126 wherein said alkyl moiety is selected  
2 from the group consisting of alkyl groups consisting of CH<sub>2</sub> groups and alkyl groups  
3 wherein one or more of said CH<sub>2</sub> groups comprises a substitute group selected from the  
4 group consisting of oxygen, sulfur, and an ester group; provided that two or more carbon  
5 atoms separate said oxygen from said ester group.

1           128. (New) The mesogens of claim 127 wherein said alkyl moiety consists  
2 essentially of a total of from 2 to 9 groups selected from the group consisting of said CH<sub>2</sub>  
3 groups and said substitute groups.

1           129. (New) The mesogens of claim 127 wherein said alkyl moiety consists  
2 essentially of a total of from 2 to 6 groups selected from the group consisting of said CH<sub>2</sub>  
3 groups and said substitute groups.

1           130. (New) The mesogens of claim 124 wherein R<sup>2</sup> is selected from the group  
2 consisting of alkyl groups having from about 1 to 6 carbon atoms and aryl groups.

1           131. (New) The mesogens of claim 124 wherein R<sup>2</sup> is selected from the group  
2 consisting of methyl groups, t-butyl groups, isopropyl groups, secondary butyl groups,  
3 and phenyl groups.

1            132.    (New) The mesogens of claim 126 wherein  $R^2$  is selected from the group  
2 consisting of methyl groups, t-butyl groups, isopropyl groups, secondary butyl groups,  
3 and phenyl groups.

1            133.    (New) The mesogens of claim 131 wherein R and  $R^3$  are selected from  
2 the group consisting of hydrogen and a methyl group.

1            134.    (New) The mesogens of claim 132 wherein R and  $R^3$  are selected from  
2 the group consisting of hydrogen and a methyl group.

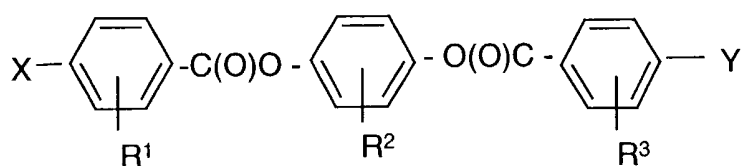
1            135.    (New) The mesogens of claim 124 wherein one or more member selected  
2 from the group consisting of X and Y comprises a spacer group.

1            136.    (New) The mesogens of claim 134 wherein one or more member selected  
2 from the group consisting of X and Y comprises a spacer group.

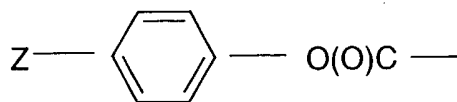
1            137.    (New) The mesogens of claim 124 wherein one or more member selected  
2 from the group consisting of X and Y comprises a cinnamoyloxy group.

1            138.    (New) The mesogens of claim 134 wherein one or more member selected  
2 from the group consisting of X and Y comprises a cinnamoyloxy group.

1            139.    (New) Mesogens having the following general formula:



3 wherein X and Y independently comprise groups selected from the group consisting of  
4 terminal functionalities and polymerizable groups, one or more member selected  
5 from the group consisting of X and Y having the following general structure:



wherein Z is selected from the group consisting of terminal functionalities and polymerizable groups;

$\text{R}^2$  is a bulky organic group having a bulk greater than  $\text{R}^1$  and  $\text{R}^3$  whereby, when both X and Y comprise polymerizable groups, said bulk provides sufficient steric hindrance to achieve a nematic state at room temperature while suppressing crystallinity at room temperature, thereby providing effective rheology and workability at room temperature; and

$\text{R}^1$  and  $\text{R}^3$  are selected from groups less bulky than  $\text{R}^2$  maintains said nematic state.

140. (New) The mesogens of claim 139 wherein said terminal functionalities independently are selected from the group consisting of hydroxyl groups, amino groups, sulfhydryl groups, and spacer groups.

141. (New) The mesogens of claim 139 wherein said terminal functionalities comprise spacer groups.

142. (New) The mesogens of claim 140 wherein said terminal functionalities comprise spacer groups.

143. (New) The mesogens of claim 139 wherein said polymerizable groups are selected from the group comprising a polymerizable unsaturated carbon-carbon bond.

144. (New) The mesogens of claim 140 wherein said polymerizable groups are selected from the group comprising a polymerizable unsaturated carbon-carbon bond.

145. (New) The mesogens of claim 141 wherein said polymerizable groups are selected from the group comprising a polymerizable unsaturated carbon-carbon bond.

1           146. (New) The mesogens of claim 142 wherein said polymerizable groups are  
2 selected from the group comprising a polymerizable unsaturated carbon-carbon bond.

1           147. (New) The mesogens of claim 139 wherein said polymerizable groups are  
2 selected from the group consisting of acryloyloxy alkoxy groups and methacryloyloxy  
3 alkoxy groups comprising an alkyl moiety having from 2 to 12 carbon atoms.

1           148. (New) The mesogens of claim 142 wherein said polymerizable groups are  
2 selected from the group consisting of acryloyloxy alkoxy groups and methacryloyloxy  
3 alkoxy groups comprising an alkyl moiety having from 2 to 12 carbon atoms.

1           149. (New) The mesogens of claim 139 wherein said polymerizable groups are  
2 selected from the group consisting of acryloyloxy alkoxy groups and methacryloyloxy  
3 alkoxy groups comprising an alkyl moiety having from 2 to 12 carbon atoms.

1           150. (New) The mesogens of claim 142 wherein said polymerizable groups are  
2 selected from the group consisting of acryloyloxy alkoxy groups and methacryloyloxy  
3 alkoxy groups comprising an alkyl moiety having from 2 to 12 carbon atoms.

1           151. (New) The mesogens of claim 147 wherein said alkyl moiety is selected  
2 from the group consisting of alkyl groups consisting of CH<sub>2</sub> groups and alkyl groups  
3 wherein one or more of said CH<sub>2</sub> groups comprises a substitute group selected from the  
4 group consisting of oxygen, sulfur, and an ester group; provided that two or more carbon  
5 atoms separate said oxygen from said ester group.

1           152. (New) The mesogens of claim 148 wherein said alkyl moiety is selected  
2 from the group consisting of alkyl groups consisting of CH<sub>2</sub> groups and alkyl groups  
3 wherein one or more of said CH<sub>2</sub> groups comprises a substitute group selected from the  
4 group consisting of oxygen, sulfur, and an ester group; provided that two or more carbon

5 atoms separate said oxygen from said ester group.

1 153. (New) The mesogens of claim 139 wherein said alkyl moiety is selected  
2 from the group consisting of alkyl groups consisting of CH<sub>2</sub> groups and alkyl groups  
3 wherein one or more of said CH<sub>2</sub> groups comprises a substitute group selected from the  
4 group consisting of oxygen, sulfur, and an ester group; provided that two or more carbon  
5 atoms separate said oxygen from said ester group.

1 154. (New) The mesogens of claim 139 wherein said alkyl moiety is selected  
2 from the group consisting of alkyl groups consisting of CH<sub>2</sub> groups and alkyl groups  
3 wherein one or more of said CH<sub>2</sub> groups comprises a substitute group selected from the  
4 group consisting of oxygen, sulfur, and an ester group; provided that two or more carbon  
5 atoms separate said oxygen from said ester group.

1 155. (New) The mesogens of claim 153 wherein said alkyl moiety consists  
2 essentially of a total of from 2 to 9 groups selected from the group consisting of said CH<sub>2</sub>  
3 groups and said substitute groups.

1 156. (New) The mesogens of claim 153 wherein said alkyl moiety consists  
2 essentially of a total of from 2 to 6 groups selected from the group consisting of said CH<sub>2</sub>  
3 groups and said substitute groups.

1 157. (New) The mesogens of claim 137 wherein R<sup>2</sup> is selected from the group  
2 consisting of alkyl groups having from about 1 to 6 carbon atoms and aryl groups.

1 158. (New) The mesogens of claim 146 wherein R<sup>2</sup> is selected from the group  
2 consisting of alkyl groups having from about 1 to 6 carbon atoms and aryl groups.

1 159. (New) The mesogens of claim 150 wherein R<sup>2</sup> is selected from the group  
2 consisting of alkyl groups having from about 1 to 6 carbon atoms and aryl groups.



1           160. (New) The mesogens of claim 154 wherein  $R^2$  is selected from the group  
2 consisting of alkyl groups having from about 1 to 6 carbon atoms and aryl groups.

1           161. (New) The mesogens of claim 156 wherein  $R^2$  is selected from the group  
2 consisting of alkyl groups having from about 1 to 6 carbon atoms and aryl groups.

1           162. (New) The mesogens of claim 137 wherein  $R^2$  is selected from the group  
2 consisting of methyl groups, t-butyl groups, isopropyl groups, secondary butyl groups,  
3 and phenyl groups.

1           163. (New) The mesogens of claim 146 wherein  $R^2$  is selected from the group  
2 consisting of methyl groups, t-butyl groups, isopropyl groups, secondary butyl groups,  
3 and phenyl groups.

1           164. (New) The mesogens of claim 150 wherein  $R^2$  is selected from the group  
2 consisting of methyl groups, t-butyl groups, isopropyl groups, secondary butyl groups,  
3 and phenyl groups.

1           165. (New) The mesogens of claim 156 wherein  $R^2$  is selected from the group  
2 consisting of methyl groups, t-butyl groups, isopropyl groups, secondary butyl groups,  
3 and phenyl groups.

1           166. (New) The mesogens of claim 154 wherein  $R^2$  is selected from the group  
2 consisting of methyl groups, t-butyl groups, isopropyl groups, secondary butyl groups,  
3 and phenyl groups.

1           167. (New) The mesogens of claim 157 wherein R and  $R^3$  are selected from  
2 the group consisting of hydrogen and a methyl group.

1           168. (New) The mesogens of claim 161 wherein R and  $R^3$  are selected from  
2 the group consisting of hydrogen and a methyl group.

1           169. (New) The mesogens of claim 162 wherein R and R<sup>3</sup> are selected from  
2 the group consisting of hydrogen and a methyl group.

1           170. (New) The mesogens of claim 166 wherein R and R<sup>3</sup> are selected from  
2 the group consisting of hydrogen and a methyl group.

1           171. (New) The mesogens of claim 137 wherein one or more member selected  
2 from the group consisting of X and Y comprises a cinnamoyloxy group.

1           172. (New) The mesogens of claim 166 wherein one or more member selected  
2 from the group consisting of X and Y comprises a cinnamoyloxy group.

1           173. (New) The mesogens of claim 170 wherein one or more member selected  
2 from the group consisting of X and Y comprises a cinnamoyloxy groups.